

Reduce lambda term to the normal form:

$$\begin{aligned} & ((\lambda a.(\lambda b.b\ b)\ (\lambda b.b\ b))\ b)\ ((\lambda c.(c\ b))\ (\lambda a.a)) \rightarrow_{\beta} \\ & \rightarrow_{\beta} ((\lambda b.b\ b)\ (\lambda b.b\ b))\ ((\lambda c.(c\ b))\ (\lambda a.a)) \rightarrow_{\beta} \\ & \rightarrow_{\beta} ((\lambda b.b\ b)\ (\lambda b.b\ b))\ ((\lambda a.a)\ b) \rightarrow_{\beta} \\ & \rightarrow_{\beta} ((\lambda b.b\ b)\ (\lambda b.b\ b))\ b \equiv \\ & \equiv \Omega\ b \end{aligned}$$